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[54] **ADAPTIVE RATE-BASED CONGESTION CONTROL IN PACKET NETWORKS**

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[57] **ABSTRACT**

An enhanced adaptive rate-based congestion control system for packet transmission networks uses the absolute rather than the relative network queuing delay measure of congestion in the network. Other features of the congestion control system include test transmissions only after a predetermined minimum time, after the receipt of an acknowledgment from the previous test, or transmission of a minimum data burst, whichever takes longest. The congestion control system also provides a small reduction in rate at low rates and a large reduction in rates at high rates. A logarithmic rate control function provides this capability. Rate damping is provided by changing all of the values in a rate look-up tables in response to excessive rate variations. Finally, the fair share of the available bandwidth is used as the starting point for rates at start-up or when a predefined rate damping region is exited.

17 Claims, 6 Drawing Sheets